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"Do elderly people living in rural areas enjoy better mental well-being? Evidence from Catalonia, Spain"

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Abstract

Despite its relevance, the effect of rurality/territory on the emotional well-being of the elderly population has not been analyzed in depth. This work examines the influence of fixed and modifiable risk factors on emotional well-being at older ages with a special attention on the level of rurality in the environment. A population-based sample of 2,621 individuals aged 65-plus from Catalonia (Spain) is used. Cross-sectional data from 2015 to 2017 were provided by an official face-to-face survey. Based on a logistic regression, our results indicate that residing in a densely populated urban area reduces mental well-being in the elderly. More factors were found to be related to emotional well-being, especially those referred to functional limitations, social support and health burden. Health officials have to ensure that people enjoy a good quality of life during their last years of life.

JEL classification: I31.

Keywords: mental well-being, rurality, longevity, Spain.

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Do elderly people living in rural areas enjoy better mental well-being? Evidence from Catalonia, Spain

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Abstract

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JEL classification: I31. General Welfare, Well-Being.

Introduction

Life expectancy around Europe has increased steadily over the past two centuries with an enormous growth of the population. As seen in the age pyramid, this increase affects particularly at older ages and in rural areas and poses new social challenges. The main challenges are to maintain an optimal quality of life, with a satisfactory emotional well-being as this is likely to multiply with age. Emotional well-being of older adults' lives is one of the factors that accompany healthy aging. This refers to how people perceive their day-to-day existence as positive or negative, making a pleasant or unpleasant life. A positive sense of emotional well-being enables people to function and be integrated into the society; moreover, those with good mental health have the ability to recover effectively from illness, change or misfortune (Chida and Steptoe, 2008). Frequently the elderly feel a burden, have little vital energy, difficulties in coping with problems, and

suffer from insecurity and sadness. This affects their physical and mental health, worsening their quality of life.

Depressive symptoms can explain some patterns of emotional well-being, although they are subject to a certain degree of heterogeneity world-wide. According to "The State of Mental Health in the European Union" (European Commission, 2004), depression is responsible for suffering from disabilities in 12% of our lifetime. However, Western populations are found to have higher levels of depression than Asian population, regardless of age (Baron and Matsuyama, 1988), which may be attributable to cultural as well as social factors. Most studies claim that prevalences of depressive symptoms are higher in urban areas. According to the literature (Marsella, 1992; Crimmins et al., 2011), there are several reasons for this: 1) decline of the community relationships and social isolation in the city; 2) greater stress with housing, work, marriage, childrearing and insecurity; 3) concentration of poverty in city centers; 4) poor social integration and social networks; 5) women are more likely to report depressive symptoms, related to sex differences in emotion or to women's living longer and experiencing more loss of family and friends (Crimmins et al., 2011). Chronic diseases among older adults are also an important factor influencing well-being. They are claimed to be linked to high levels of unpleasant daily experiences (Wikman, Wardle, and Steptoe, 2011). But they exert a specially negative burden on physical activity, which according to Acree et al. (2006), positively influences mental well-being and the health-related quality of life among older adults. Following Anaby et al. (2011), the worse the chronic conditions, the lower the experienced well-being. Thus, it is crucial to promote the importance of preparing for successful aging at younger stages of the life cycle as this might improve the quality of life at very old ages (Alcañiz and Solé-Auró, 2018).

One of the key aspects in this respect is social support. It constitutes an important determinant of an elderly person's health and of functioning in his or her living environment. Generally, social support is considered as a valuable asset that may compensate for health service deficiencies among rural populations. As a resource derived from social networks (e.g., family members or friends, among others) it enhances one's ability to cope with daily life events and may be different in rural and urban areas. Wang (2016) studied the impact of the size of the social network as well as the perceiving

social support associated with emotional well-being (and how it may be in favor of people living in less dense areas. Engagement in social activities and provision of care to grandchildren may be beneficial for older people's health and subjective well-being (Han et al., 2017; Arpino and Bordone, 2014). Linked to this aspect, gender may play a certain role. Tagaki et al. (2013) found that higher social participation had protective effects on depressive symptoms for women; however, no significant effects for the mental health of men were found. Furthermore, the level of education and income may also modify the emotional well-being. Arpino and Solé-Auró (2019), using European data, found that educational inequalities can be partially explained by different levels of active ageing engagement. They conclude that older people with high levels of education reported higher engagement in active aging activities. Kahneman and Deaton (2010), using US data, found that income and education are more closely related to life evaluation while health, care giving, loneliness and smoking are more related to daily emotions. They conclude that high income buys life satisfaction but not happiness, and that low income is associated both with low life evaluation and low emotional well-being. Mixed evidence is also reported by Seeman (2000). He concludes that social relationships and the aspects referring to social environment have the potential for both health promoting and health damaging effects in older adults.

The degree of rurality in the area in which older people live also seems to be related to their life satisfaction, although the literature is scarce and does not show conclusive results. Several definitions of "rural" are available and each one emphasizes different criteria (population size, density, context). The "rural and small town" definition is based on the population living in towns and municipalities outside the commuting zone of larger urban centers (Du Plessis et al., 2002). While some studies suggest that the rural environment seems to have a positive effect on mental well-being (Nepomuceno et al., 2016), especially in developed environments (Easterlin et al., 2011; Requena, 2016), others emphasize the impact negative isolation of rural communities (Eckert et al., 2004), and the stigma that may arise for their residents to seek help to treat mental health problems, given that communities are small and social networks do not favor privacy (Komiti et al., 2006; Judd et al., 2006). The literature also points out that psychosocial

factors determine to a greater extent affective or anxiety disorders than the isolation of communities per se (Eckert et al., 2006).

Thus, the place where you live may influence your health and well-being. Zaidi et al. (2017) report a measure for active and healthy ageing for the 28 European Union countries. Antczak and Zaidi (2018) observe that Eastern European non-EU countries are more diverse in terms of well-being of older people than the EU member States nearby. Following Vozikaki et al. (2018) frequent offspring contact is much more difficult to occur among northern Europeans, than among southern citizens. In turn, northern old Europeans prefer living alone, partly in search of more autonomy and independence. Vozikaki et al. (2017) report a positive connection between well-being and activity engagement, which differ among countries. The same authors addressed that living in a more ruralized or more urbanized area might affect emotional well-being; for instance, living in poverty and growing up in a deprived neighborhood could have direct consequences such as poor housing conditions, educational problems or feeling unsafe in your own place.

Across European countries, much of rural Europe has witnessed vast changes over the past two decades, including major demographic and economic changes. Concerning our research, that was carried out in Catalonia (Spain), the degrees of rurality change substantially across Spanish regions. According to official data from the Catalan Institute of Statistics (2019), the approximate population of Catalonia in 2017 was 7.5 million inhabitants, of which 63.9% lived in the metropolitan area of Barcelona. The population density was 235.3 inhabitants per km2 (1,942.3 inhabitants per km2 in the metropolitan region) and the average household annual net income was 12,712 euros per person, 14.8% higher than for Spain as a whole. In relation to the demographic structure, 18.9% of the Catalan population was 65 years old or older and, within that stratum, 57.1% were women.

Despite its importance, the effect of the region on emotional well-being has not been examined with sufficient depth when investigating older adults. Therefore, the main aim of this research is to examine how fixed and modifiable risk factors affect emotional well-being in the last stages of life, with special emphasis on the influence of the level of rurality in the environment. Evidence will be sought to conclude whether residing in

urban areas, generally densely populated and with an accelerated rhythm of life, reduces emotional well-being in the elderly or, on the contrary, isolation from rural areas contributes to a greater extent to their psychological discomfort.

This study aims to gather the main influences on low mental well-being at older ages and examine the impact of the level of rurality. Our work adds to the existing literature a novelty in the field as the determinants of positive mental well-being had not yet been analyzed in the context of older Catalan population with a specific focus on the influence of the rural or urban environment.

Materials and Methods

Data

We use cross-sectional microdata from the Catalan Health Survey (ESCA, Catalan Health Department, 2018). ESCA is an official survey conducted among the Catalan population, in the northeastern corner of Spain. ESCA is repeated on a twice-yearly basis since 2010. The data collection is based on computed-assisted face-to-face interviews, and provides extensive information on individuals' health and lifestyles, in relation to a wide set of sociodemographic factors. The sample uses a semi-annual random design, with strata based on age, gender and geographical area (Alcañiz et al., 2014), and it is representative of the global population.

The current study uses the 2015-2017 sample of 2,621 individuals (1,219 males and 1,402 females) aged 65 years and older. We excluded 326 individuals that were interviewed through an informant, as the indirect questionnaire did not ask about mental well-being. In 38.3% of the cases, the original sample unit could not be reached by the interviewer. Following the ESCA standard procedure, a substitute identical to the original in terms of the stratification variables was designated. The overall final response rate was 100%.

Measures

The variables examined in the current study were derived from the ESCA questionnaire, which includes numerous questions about family and sociodemographic context, health

status and quality of life, mental health, chronic morbidity, limitations and disability, and social support, among others. The rural typology of the county where the respondent lived was created according to the Organization for Economic Cooperation and Development criteria (OECD, 2011). Besides the ESCA variables used measures from validated scales, which are identified below.

Outcome measure

The shortened version of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Stewart-Brown et al., 2011; Taggart et al., 2013) was used to assess the mental well-being for our population of individuals aged 65 and over. The original 14-item scale and its shortened 7-item version (SWEMWBS) were developed and validated in the NHS Health Scotland (Tennant et al., 2006; Stewart-Brown et al, 2009). The validity and reliability of the scale Spanish version was assessed by Castellví et al. (2014).

The SWEMWBS measures mental well-being in the previous two weeks. Questions relate to feeling optimistic about the future, useful, relaxed, dealing with problems well, thinking clearly, feeling close to other people, and making up their own mind about things. Each item is ranked within a 5-point Likert-type scale from "None of the time" to "All of the time". The addition of all the items results in a global score, with higher scores indicating better levels of mental well-being (range 7 to 35). As suggested by the experts panel (Stewart-Brown et al., 2009) we applied a conversion table to the global score, to make comparisons across different countries possible. Next, following Davoren et al. (2013), the indicator of emotional well-being was built: individuals with global scores below the mean minus one standard deviation were considered with low emotional well-being, while the rest were attributed normal emotional well-being (scores on the average or above).

Risk factors

We considered several risk factors that might influence the mental well-being of the older people.

Demographic factors: gender, age groups (65-74, 75-84, 85-plus), household size (lives alone or lives with other household members), and educational attainment (low – less than high school vs. middle/high – upper secondary or tertiary).

Economic status: in the absence of reliable data on income, a proxy variable included in the survey was used. It measures family ends meet at the end of the month (with great difficulty, with some difficulty, or easily).

Self-perceived health: respondents give an overall subjective assessment of their health answering the question: "How is your health in general?". Responses were grouped into three categories: good (excellent, very good or good), fair or bad.

Physical health burden: respondents were asked: "Do you have or has a doctor ever told you that you have any of the following conditions (…)?", followed by a list of 32 chronic medical disorders. As in other studies (Ross et al., 2003; Atkins et al., 2013), we created an indicator for the presence of some selected conditions that are usually associated with quality of life loss of psychological distress: diabetes, anemia, arthrosis, arthritis, rheumatism, stroke, heart attack or other heart diseases, malignant tumors or Parkinson's disease.

Functional limitations and dependence: level of sensory loss (none, one limitation, or two or more limitations regarding hearing, seeing, speaking, and writing or reading); presence of limitations for activities of daily living (ADL) (without limitations or slightly limited vs. seriously limited); and need for help or company in carrying out the ADL (never vs. occasionally or regularly).

Social support: an indicator of low or normal social support was created using the 11-item version of the Duke Social Support Index (DSSI) (Koenig et al., 1993; Goodger et al., 1999) included in the ESCA questionnaire. The 11-item DSSI comprises two dimensions: social interactions (frequency of social contact) and subjective support (satisfaction with emotional support provided). The item response options are on a 5-point scale ranging from 1 (much less than I would like) to 5 (as much as I would like). Social support was considered normal if the 11-item global score is >32; otherwise it was considered low.

Family burden: the respondent performs informal care tasks for a disabled person or a person over 75.

Physical activity: ESCA provides the International Physical Activity Questionnaire, which classifies physical activity as low, moderate or vigorous (Roman et al., 2013).

Sleep hours: participants were asked about their sleeping hours: more than 8 hours per day, between 6 and 8 hours, and less than 6 hours.

Territorial factor

Municipalities included in the sample were classified according to their rural, semi-rural or urban typology. Catalonia is divided into 42 districts and 947 municipalities. No standard definition of rural areas has been agreed yet, although they are mainly based on population aspects or geographical aspects. Consequently the percentage of rural population will vary accordingly. Following the classification proposed by the OECD (2011), predominantly urban districts are those with less than 15% of municipalities with a population density below 150 inhabitants / km2; for semi-rural districts that percentage is between 15 and 50%; finally for predominantly rural districts, the percentage exceeds 50%. Initially, each municipality in our database was assigned the level of rurality of its district. Following Philo et al. (2003), who recommend to select definitions of rurality that are appropriate to the study being conducted, we corrected the previous classification based on the criteria of the Spanish National Institute of Statistics (Sancho and Reinoso, 2012), given the need to identify unique municipalities in relation to the typology of its district. So, semi-rural typology was assigned to the municipalities of rural districts with a population above 10,000 inhabitants and to municipalities of urban districts with a population of less than 10,000 inhabitants; likewise, municipalities with less than 2,000 inhabitants were considered rural. Under this criterion, in 2017, 6.6% of the Catalan population lived in rural municipalities; 26.4%, in semi-rural municipalities; and 67.0%; in urban municipalities. The surface area of the rural, semi-rural and urban municipalities corresponds respectively to 73.3%, 21.4% and 5.3% of the total Catalan territory.

Methods

We segmented the individuals in the sample according to the rural/semi-rural/urban typology of their home municipality. To answer the first research question, a thorough descriptive analysis of the variables has been undertaken as well as a multivariate analysis. Sociodemographic, health and lifestyle characteristics of each sampling group

are described in Table 1. In addition, a logistic regression for normal versus low emotional well-being scores according to the SWEMWBS was implemented. All risk factors, including the level of rurality of home municipality, were used as regressors. We tested for heteroscedasticity and multicollinearity and obtained negative results. The outcomes (Table 2) are presented as odds-ratios with their respective p-values (significance levels at 1, 5 and 10%) and 95% confidence intervals.

Rural and semi-rural respondents were over-represented in the ESCA sample, thus allowing results to be extracted for the three categories of rurality. Sampling weights provided by the survey experts panel were used in the analyses in Tables 2 to correct for age and gender deviations between the structure of our sample and that of the Catalan population. Those weights are corrected to sum up the sample size. All statistical analyses were performed using IBM® SPSS® Statistics version 25.

Results

Table 1 shows the sample characteristics by the level or rurality of the municipality were respondents live. On average, younger people, more women respondents with middle or high education tend to live in more urban areas. However, the percentage of persons living alone was very similar (around 22%) regardless of the level of rurality. Rural residents seemed to make ends meet more easily than the rest (72.8% declared no difficulty versus 61.1% for semi-rural and 62.4% for urban areas). Respondents that lived in semi-rural areas declared to feel better, despite the fact that they were the ones who reported the highest morbidity level (74.0% declared suffering from some of them, as opposed to 70.4% of those living in urban areas); they also reported the highest proportion of serious limitations for ADLs. Rural residents also enjoyed the greatest social support, which was considered normal in 97.7% of cases, two points above the percentages for semi-rural or urban areas.

In relation to lifestyles, the level of physical activity in urban areas was higher than the rest (34.7% presented low physical activity, compared to around 40% in the semi-rural or rural areas). People living in urban areas dedicated the least hours per day to sleep: only 15.8% declared to sleep more than 8 hours per day, compared to 20.8% in semi-urban

and 26.1% in rural areas. Finally, sample results show that the higher the level of rurality, the better emotional well-being: while in urban areas 21.4% of the sample individuals had deficient scores, this percentage was reduced to 17.4% for semi-rural and 12.9% for rural residents.

[Insert Table 1 about here]

Which are the factors associated with mental well-being? The logistic regression model helps explain low scores of mental well-being according to the SWEMWBS (Table 2). According to them, being female or being older is not significantly associated with mental well-being; individuals that live alone (OR=1.36, p=0.049), have below primary education (OR=1.74, p=0.000), and those that have great or some difficulty to reach the end of the month (OR=1.69, p=0.003; OR=1.49, p=0.006, respectively) are likely to have a low level of mental well-being.

Variables relating to health status, loss of personal autonomy and social support have an important impact on the probability of suffering low mental well-being. Individuals with poor or regular health present a greater risk of low mental well-being (OR=4.19, p=0.000; OR=2.38, p=0.000, respectively). Similarly, suffering from one of the selected physical diseases increases the risk of emotional distress (OR=1.52, p=0.022). Those who have more than one limitation sensory losses, severe limitations for ADLs(OR=1.97, p=0.002), lack of personal autonomy (OR=3.23, p=0.000), low social support (OR=3.86, p=0.000) or are informal caregivers of a disabled person or person over 75 (OR=1.37, p=0.058) have a greater probability of low mental well-being.

According to our results, leading a physically active life and getting enough sleep are facilitating factors to correct mental well-being. Specifically, those with low or moderate levels of physical activity have a higher probability of poor mental well-being (OR=2.84, p=0.001; OR=2.17, p=0.015, respectively) than the elders that engage in vigorous physical activity. Likewise, lack of sleep shows a negative impact: those who sleep less than 8 hours a day have larger risk of poor mental well-being (OR=2.12, p=0.001; OR=1.43, p=0.032, respectively). The model does not include other lifestyle variables, such as tobacco or alcohol consumption, since no significant association was found with the variable of interest.

Finally, individuals living in urban areas are twice as likely to experience emotional distress as those living in rural areas. (OR=2.00, p=0.000). This effect is somehow lower in semirural areas, although it is still significant (OR=1.44, p=0.053).

[Insert Table 2 about here]

Conclusions

The aim of the paper was to show the main influences on mental well-being at older ages as well as to examine the discrepancies as a result of the level of rurality. Findings confirm the factors with a relevant impact on mental well-being revealing the existence of major differences between rural and urban areas.

According to the analysis carried out, the variables studied relate to emotional well-being as expected. The effect of sex and age, which is derived from the univariate descriptive analysis, is not relevant in the multivariate model. However, a low socio-economic and educational level would entail a larger risk of emotional distress. Lifestyles also have an impact on emotional well-being. Practicing physical activity and sleeping a sufficient number of hours a day revert to a better mood. According to the National Sleep Foundation (Hirshkowitz et al., 2015), the recommended sleeping hours for health and well-being at older ages would be between 7 and 8 per day, though some individuals may have enough with fewer hours. Similarly, living alone and having low social support are risk factors to be taken into account, reinforcing the results already known on the importance of interacting with other people in all stages of life, but especially in older ages. Also poor health, both subjective and objective, reverts to emotional distress, often causing anxiety and depression in the elderly. Likewise, sensory or functional limitations, which imply the need for help to be able to manage oneself in daily life, carry an emotional burden for the elderly, who see a reduction in their personal autonomy. This burden is aggravated if the old person is an informal caregiver for disabled persons or persons over 75. If care takes place in rural areas, with difficult access to shops and services, the caregiver may see an increased risk of poor mental health. In fact, the main problems rural residents face are lack of public transport and lack of access to health and

social care. Besides, prices in rural areas are typically higher than in urban areas. A high level of population dispersion and the constant reduction of rural population contributes to it and increases the costs of maintaining a comprehensive service infrastructure.

A key implication from the paper is that the rurality of the environment is clearly associated with the level of mental well-being of the residents. The results for the population aged 65 and older in Catalonia show that the higher the level of rurality of the municipality of residence, the better the level of mental well-being. These results are in line with other studies (Requena, F., 2016), which indicate that, in rich countries, rural living standards are high enough to create a higher level of subjective well-being than the level achieved in urban areas.

In view of that situation, politics is crucial. Political decisions should be actively devoted to planning services. Policies are to be designed flexible and implemented at a local level, with support and collaboration from the state government. Among the main policies, prevention of loneliness both in rural and urban areas is to be made a priority, along with housing policies to allow older people to 'age in place', easy access to transport, and access to health, mental healthcare and social care. In short, social policies intended to address not only health aspects but comprehensive well-being, which happens to be crucial for rural residents. In particular, increasing the overall quality of life in rural areas will enable residents and specially old ones to surmount the main obstacles they face, resulting in an improvement of the attractiveness of these areas.

Rural communities in many countries are undoubtedly ageing faster, and Catalonia is not an exception, but according to our results rural Catalan people seem to age healthier in mental terms than urban ones. In fact, the risk of emotional distress decreases the greater the rurality of the municipality of residence. Consequently, given these results, efforts should be continued in order to prevent further reduction in rural population and to promote rural living. To face the new social phenomenon it is necessary to design economic policies that guarantee the elderly the perception of sufficient annuities to avoid aging in precarious conditions. Moreover, health officials have to ensure that people enjoy a good quality of life during their last years of life.

Tables

Table 1. Sample characteristics by level of rurality of home municipality. Individuals aged 65-plus.

		Level of rurality			
	Sample size	Total	Rural (n=527)	Semi-rural (n=872)	Urban (n=1,222)
Age in years, mean (SD)	2,621	76,1 (7,7)	76.6 (8.0)	76.3 (7.9)	75.7 (7.5)
Age groups	2,621				
65-74		47.6	44.8	46.6	49.6
75-84		34.7	35.9	34.9	34.1
85+		17.7	19.4	18.6	16.3
Gender	2,621				
Male		46.5	48.0	47.9	44.8
Female		53.5	52.0	52.1	55.2
Household size	2,621				
Living alone		22.1	22.2	22.1	22.1
More than one member		77.9	77.8	77.9	77.9
Level of education	2,620				
Middle or high		42.9	37.8	41.4	46.3
Low		57.1	62.2	58.6	53.7
How do they make ends meet?	2,613				
With great difficulty		11.7	8.9	12.1	12.7
With some difficulty		24.2	18.3	26.8	24.9
With ease		64.1	72.8	61.1	62.4
Self-perceived health	2,620				
Poor		8.5	8.0	7.2	9.6
Fair		32.5	32.3	31.0	33.7
Good		59.0	59.8	61.8	56.8
Morbidity	2,621				
Yes		72.0	72.7	74.0	70.4
No		28.0	27.3	26.0	29.6
Sensory loss	2,621				
2 or more limitations		3.7	3.8	4.1	3.4
Only one limitation		8.9	10.6	7.6	9.1
Without limitations		87.4	85.6	88.3	87.5
Severe limitation for ADL	2,621				
Yes		6.7	5.9	7.3	6.6
No		93.3	94.1	92.7	93.4
Needs help for ADL	2,621				
Yes		21.8	20.1	22.0	22.4
No		78.2	79.9	78.0	77.6
Social support	2,608				
Low		3.9	2.3	4.3	4.3
Normal		96.1	97.7	95.7	95.7
Caregiver of disabled/75+	2,621				
Yes		18.4	17.1	19.5	18.2
No		81.6	82.9	80.5	81.8
Physical activity	2,621				
Low		37.5	39.1	40.6	34.7
Moderate		53.3	51.6	50.2	56.3
Vigorous		9.1	9.3	9.2	9.0
Sleeping hours	2,615				
Less than 6 hours/day		11.4	9.5	11.8	11.8
6 to 8 hours/day		69.1	64.4	67.4	72.4

More than 8 hours/day		19.5	26.1	20.8	15.8
Emotional well-being	2,621				
Low		18.4	12.9	17.4	21.4
Normal		81.6	87.1	82.6	78.6

Source: ESCA, 2015-2017.

Note: numbers are percentages (%) unless otherwise stated. n=sample size. SD: standard deviation. ADL: activities of daily living.

Table 2. Logistic regression model for the SWEMWBS indicator (1=low; 0=normal)

	Odds-ratio	CI 95%
Age groups (ref. 65-74)		
75-84	0.92	(0,72; 1,19)
85+	1.18	(0,88; 1,58)
Gender (ref. Male)		
Female	1.20	(0,85; 1,71)
Household size (ref. More than one member)		
Living alone	1.36 **	(1,00; 1,84)
Level of education (ref. Middle or high)		
Low	1.74 ***	(1,33; 2,27)
How do they make ends meet? (ref. With ease)		
With great difficulty	1.69 ***	(1,20; 2,39)
With some difficulty	1.49 ***	(1,12; 1,97)
Self-perceived health (ref. Good)		
Poor	4.19 ***	(2,79; 6,29)
Fair	2.38 ***	(1,80; 3,14)
Morbidity (ref. No)		
Yes	1.52 **	(1,06; 2,18)
Sensory loss (ref. Without limitations)		
2 or more limitations	2.69 ***	(1,61; 4,47)
Only one limitation	1.48 **	(1,03; 2,14)
Severe limitation for ADL (ref. No)		
Yes	1.97 ***	(1,29; 3,00)
Nees help for ADL (ref. No)		
Yes	3.23 ***	(2,44; 4,28)
Social support (ref. Normal)		
Low	3.86 ***	(2,34; 6,37)
Caregiver of disabled/75+ (ref. No)		
Yes	1.37 *	(0,99; 1,91)
Physical activity (ref. Vigorous)		
Low	2.84 ***	(1,51; 5,37)
Moderate	2.17 **	(1,16; 4,08)
Sleeping hours (ref. More than 8 hours/day)		
Less than 6 hours/day	2.12 ***	(1,39; 3,23)
6 to 8 hours/day	1.43 **	(1,03; 1,98)
Level of rurality (ref. Rural)		
Semi-rural	1.44 *	(0,99; 2,08)
Urban	2.00 ***	(1,41; 2,83)

Source: ESCA, 2015-2017. ***p<0.01, **p<0.05, *p<0.10. SWEMWBS: Warwick Edinburgh Mental Well-Being Scale, short version. CI: confidence interval. Ref.: reference category. ADL: activities of daily living.

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